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NEW RESULTS OF COMMON FIXED-POINT THEOREMS FOR T-CONTRACTION TYPE MAPPINGS IN CONE METRIC SPACES WITH C-DISTANCE

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Abstract: In this manuscript, we prove the existence and uniqueness of common fixed point of T- contraction type mapping under the concept of c- distance in cone metric spaces. Our results generalize, refinement and improvement the well-known previous result of Dubey et al. [9].

Keywords and Phrases: Fixed point, common fixed point, cone metric space, T- contraction mapping, c- distance.

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1. Introduction

The concept of fixed point was established by S. Banach in 1922 for contraction mapping, which is known as Banach fixed point theorem [2]. Since then, many authors have obtained various extensions and generalizations of [2] by using contraction mapping in different spaces.

In 2007, Huang and Zhang [18] generalized the concept of metric spaces and define a new space, which is called a cone metric space by replacing the set of real numbers by an ordered Banach space. Also they described the convergence of sequences in the cone metric spaces and they proved the following theorems:

Theorem 1.1. *Let (X, d) be a cone metric space, P be a normal cone with normal*